ANTIMICROBIAL PROPERTIES OF PIPER BETLE ON COTTON FABRICS

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ABSTRACT

ANTIMICROBIAL PROPERTIES OF PIPER BETLE ON COTTON FABRICS

Current antimicrobial treated fabrics available in the market are mostly treated with chemical antimicrobial agent which brings negative impact to the environment and human's health. In this study, the effectiveness of piper betle extract on cotton fabric was evaluated. In addition, this study also evaluated the performance of different extraction techniques on the antimicrobial activity of the treated samples. The piper betle leaves were collected, dried and ground to powdered form. The bioactive components were then extracted using soxhlet and maceration techniques. The piper betle extract was tested against *Staphylococcus aureus* and *Klebsiella pneumoniae*. The results showed that the piper betle leaves extract has great potential as antimicrobial agent on cotton fabric. In addition, maceration technique have better antimicrobial activity compared to soxhlet extraction technique despite soxhlet extraction technique being a better extraction technique.